

7. *On a New Fossil Elephant from Okubo-mura, Akashi-gun, Hyogo Prefecture, Japan.*¹⁾

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Although both Drs. H. Matsumoto and J. Makiyama wrote on the fossil elephants that were dredged some years ago from the bottom of the Inland Sea of Japan, no description has yet been published of the elephant specimens that were found later in a stratum exposed along the eastern part of the same sea. The molar tooth to be described here was obtained by Mr. Matsujiro Sakurai from the shore of the clifly coast, west of Nishiyagi, Okubo-mura, Akashi-gun, Hyogo prefecture, where the Nishiyagi clay bed consists chiefly of bluish coloured clay, intercalating yellowish-brown coloured sand and mud, and two zones of white volcanic ash, measuring together 10–100 cm in thickness. This formation, which crops out along the shore line of Nishiyagi and the valleys of the Akashi-gawa and other streams, and which either almost horizontal or dips slightly SW monoclinaly, is covered by the Akashi gravel bed and terrace deposit. The age of this clay bed is probably either older Pleistocene or youngest Pliocene. Although, from the fact that the present specimen has a lower crown than the specimens of the Elephantinae besides certain other features, it undoubtedly belongs to the Stegodontinae, yet in the matter of shape, size, and the number of ridge-crests, especially in the figure of the grinding surface, it differs from any Stegodontinae ever described from Japan or elsewhere. The writer therefore treats this specimen as a new species under the name of *Parastegodon akashiensis*. He records here his indebtedness to Dr. S. Tokunaga for his many advices in the course of this study. Thanks are due to Mr. M. Sakurai, who kindly loaned him his collection.

1) See the next article "Note on *Parastegodon akashiensis* Takai from the Akasi District" by Mr. T. Shikama. Both authors, Mr. Takai and Mr. Shikama, studied the same molar illustrated in this article independently and without knowing the other's work going on, the former in the Geological Institute of the Tokyo Imperial University and the latter in the Institute of Geology and Palaeontology of the Tôhoku Imperial University. Shikama extended his studies simultaneously to 2 skulls with molars, a lower jaw with molars and some other isolate molars from the same locality: recognising the specific identity of all these specimens, he selected the skull illustrated in his paper, the next article, as the holotype of his new species *Parastegodon nipponicus* in his manuscript. Meanwhile, Mr. Takai announced his new species in a lecture delivered at the meeting of the Palaeontological Society of Japan, November 30, 1935. While this does not by no means guarantee priority on the International Rules of Zoological Nomenclature, Mr. Shikama generously consented to withdraw his original intention and to accept Takai's species name as established. It brought with it a rather undesirable result of taking as the holotype of the new species a single molar instead of a better material, a skull with molars.

Yabe.

Parastegodon akashiensis, n. sp.

An almost complete cheek tooth, the base of the crown of which is slightly convex antero-posteriorly, belongs to the upper jaw. Viewed on the grinding surface, the left side of the tooth is slightly convex, while the right side is nearly straight, showing that it is from the right side of the upper jaw. The grinding surface of the present specimen is of elliptical shape, slightly convex and intersecting with the base of the crown at an angle of about 25° . The tooth becomes gradually narrower from front to back. The fangs are very complicated, but usually one to each ridge-crest save the eighth and ninth ridge-crests which have a single common root. The anterior part of the crown and of the fangs being broken off, the number of ridge-crests that have been lost cannot be clearly known. But its posterior margin being preserved, probably it is only the first ridge-crest that is wanting. The lateral sides of the second ridge-crest and the outer one of the third ridge-crest are somewhat damaged. It is apparent that the complete crown of the present specimen had consisted of nine ridge-

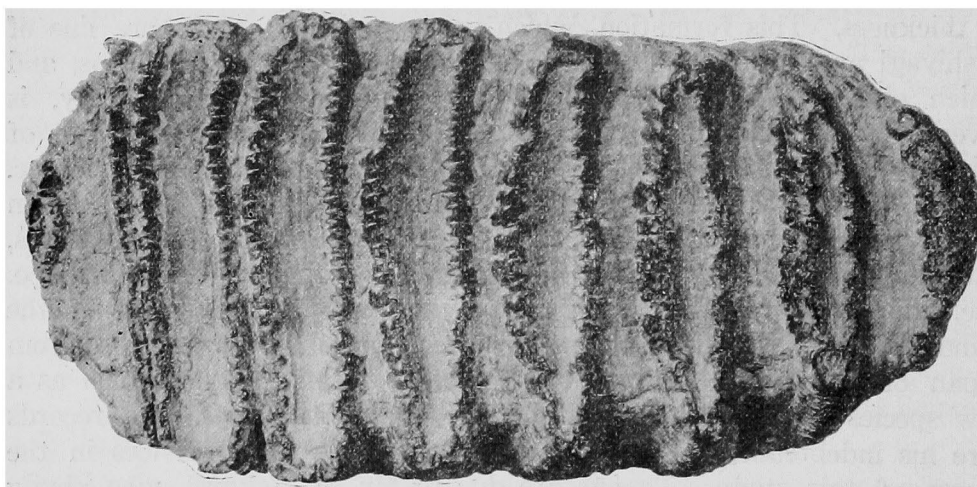


Fig. 1. *Parastegodon akashiensis*; crown view; $\times \frac{1}{2}$.

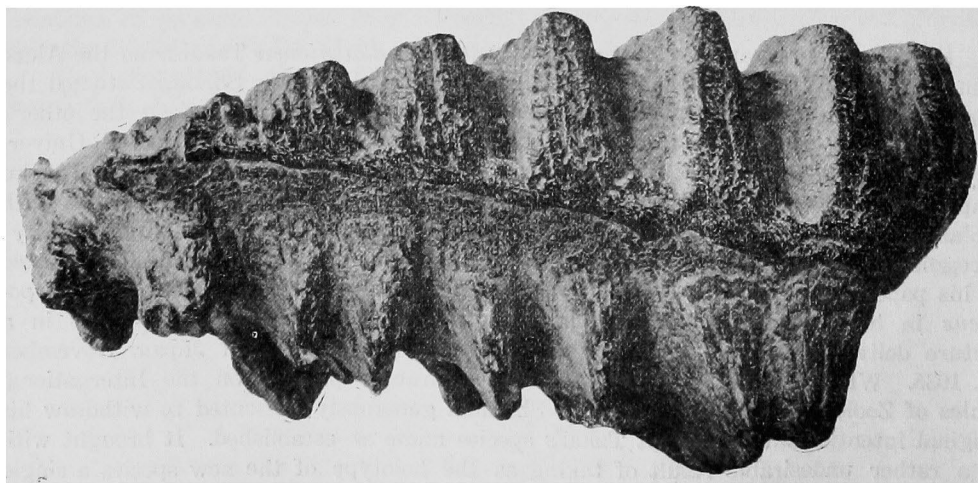


Fig. 2. The same specimen; outer view; $\times \frac{1}{2}$.

crests. The length of the crown measures about 140 mm, the width of the crown at the grinding surface 62 mm at the sixth ridge-crest, and 68 mm at the base of the sixth ridge-crest, while the distance between the base of the crown and the grinding surface, namely the height of the unworn or very slightly worn ridge-crest, is 38.5 mm at the ninth ridge-crest. Excepting the ninth ridge-crest, all the others are worn away. The cusps of the ninth ridge-crest are merely flattened, while the outermost cusp is intact. The enamel of none of the ridge-crests shows any constrictions, presenting finely plicated and slender forms. The enamel itself is 2-2.5 mm thick. As seen sideways the ridge-crests are tall and slender, highest at their mesial parts and declining forward. The valleys, which are deep, narrow, and U-shaped, are partially filled with cement. No "Stufenbildung" character can be observed in the structure of the enamel of the present fossil. The present specimen may represent either the first or the second molar.

The character of the enamel plication, and the side aspects of the ridge-crests of the present specimen do not agree with those of any Stegodontinae so far described from Japan. As compared with *Parastegodon sugiyamai* Tokunaga, the present species has no constrictions of the enamel layer in the grinding surface, the valleys are broader and the fangs are shorter. The present species may be a form transitional between Stegodontinae and Elephantinae.
